

Association Rules

Generated Transaction

Frequent Itemsets from Apriori:

	support	itemsets
0	0.25	(Item 1)
1	0.25	(Item 2)
2	0.26	(Item 3)
3	0.26	(Item 4)
4	0.21	(Item 5)
5	0.35	(Item 6)
6	0.36	(Item 7)
7	0.36	(Item 8)
8	0.34	(Item 9)
9	0.29	(Item 10)
10	0.11	(Item 7, Item 1)
11	0.12	(Item 7, Item 2)
12	0.12	(Item 2, Item 8)
13	0.11	(Item 7, Item 3)
14	0.12	(Item 8, Item 3)
15	0.12	(Item 7, Item 4)
16	0.10	(Item 4, Item 9)
17	0.10	(Item 4, Item 10)
18	0.13	(Item 7, Item 6)
19	0.14	(Item 8, Item 6)
20	0.14	(Item 10, Item 6)
21	0.12	(Item 7, Item 8)
22	0.16	(Item 7, Item 9)
23	0.11	(Item 7, Item 10)
24	0.10	(Item 9, Item 8)
25	0.11	(Item 10, Item 8)

Association Rules from Apriori:

	antecedents	consequents	antecedent support	consequent support	support \
0	(Item 1)	(Item 7)	0.25	0.36	0.11
1	(Item 2)	(Item 7)	0.25	0.36	0.12
2	(Item 2)	(Item 8)	0.25	0.36	0.12
3	(Item 3)	(Item 7)	0.26	0.36	0.11
4	(Item 3)	(Item 8)	0.26	0.36	0.12
5	(Item 4)	(Item 7)	0.26	0.36	0.12
6	(Item 6)	(Item 8)	0.35	0.36	0.14
7	(Item 10)	(Item 6)	0.29	0.35	0.14
8	(Item 6)	(Item 10)	0.35	0.29	0.14
9	(Item 7)	(Item 9)	0.36	0.34	0.16
10	(Item 9)	(Item 7)	0.34	0.36	0.16

	confidence	lift	leverage	conviction	zhangs_metric
0	0.440000	1.222222	0.0200	1.142857	0.242424
1	0.480000	1.333333	0.0300	1.230769	0.333333
2	0.480000	1.333333	0.0300	1.230769	0.333333
3	0.423077	1.175214	0.0164	1.109333	0.201474
4	0.461538	1.282051	0.0264	1.188571	0.297297
5	0.461538	1.282051	0.0264	1.188571	0.297297
6	0.400000	1.111111	0.0140	1.066667	0.153846
7	0.482759	1.379310	0.0385	1.256667	0.387324
8	0.400000	1.379310	0.0385	1.183333	0.423077
9	0.444444	1.307190	0.0376	1.188000	0.367187
10	0.470588	1.307190	0.0376	1.208889	0.356061

/usr/local/lib/python3.10/dist-packages/ipykernel/ipkernel.py:283: DeprecationWarning: and should_run_async(code)

Sample Transaction

Frequent Itemsets from Apriori:

	support	itemsets
0	0.26	(Item 1)
1	0.35	(Item 2)
2	0.28	(Item 3)
3	0.22	(Item 4)
4	0.35	(Item 5)
5	0.36	(Item 6)
6	0.36	(Item 7)
7	0.28	(Item 8)
8	0.30	(Item 9)
9	0.35	(Item 10)
10	0.11	(Item 1, Item 5)
11	0.11	(Item 2, Item 5)
12	0.16	(Item 2, Item 6)
13	0.10	(Item 7, Item 2)
14	0.13	(Item 2, Item 8)
15	0.11	(Item 2, Item 10)
16	0.18	(Item 10, Item 3)
17	0.12	(Item 4, Item 10)
18	0.11	(Item 5, Item 6)
19	0.15	(Item 7, Item 5)
20	0.12	(Item 5, Item 9)
21	0.10	(Item 5, Item 10)
22	0.10	(Item 7, Item 6)
23	0.10	(Item 8, Item 6)
24	0.10	(Item 7, Item 8)
25	0.10	(Item 7, Item 9)
26	0.11	(Item 7, Item 10)
27	0.14	(Item 10, Item 9)

Association Rules from Apriori:

	antecedents	consequents	antecedent support	consequent support	support \
0	(Item 10)	(Item 3)	0.35	0.28	0.18
1	(Item 3)	(Item 10)	0.28	0.35	0.18
2	(Item 4)	(Item 10)	0.22	0.35	0.12

	confidence	lift	leverage	conviction	zhangs_metric
0	0.514286	1.836735	0.082	1.482353	0.700855
1	0.642857	1.836735	0.082	1.820000	0.632716
2	0.545455	1.558442	0.043	1.430000	0.459402

Frequent Item Sets

Generated Transaction

Frequent Itemsets from FP-Growth:

	support	itemsets
0	0.36	(Item 8)
1	0.21	(Item 5)
2	0.36	(Item 7)
3	0.25	(Item 2)
4	0.34	(Item 9)
5	0.25	(Item 1)
6	0.26	(Item 3)
7	0.35	(Item 6)
8	0.26	(Item 4)
9	0.29	(Item 10)
10	0.12	(Item 7, Item 8)
11	0.12	(Item 7, Item 2)
12	0.12	(Item 2, Item 8)
13	0.10	(Item 9, Item 8)
14	0.16	(Item 7, Item 9)
15	0.11	(Item 7, Item 1)
16	0.12	(Item 8, Item 3)
17	0.11	(Item 7, Item 3)
18	0.14	(Item 8, Item 6)
19	0.13	(Item 7, Item 6)
20	0.12	(Item 7, Item 4)
21	0.10	(Item 4, Item 10)
22	0.10	(Item 4, Item 9)
23	0.11	(Item 7, Item 10)
24	0.11	(Item 10, Item 8)
25	0.14	(Item 10, Item 6)

Association Rules from FP-Growth:

	antecedents	consequents	antecedent support	consequent support	support \
0	(Item 2)	(Item 7)	0.25	0.36	0.12
1	(Item 2)	(Item 8)	0.25	0.36	0.12
2	(Item 7)	(Item 9)	0.36	0.34	0.16
3	(Item 9)	(Item 7)	0.34	0.36	0.16
4	(Item 1)	(Item 7)	0.25	0.36	0.11
5	(Item 3)	(Item 8)	0.26	0.36	0.12
6	(Item 3)	(Item 7)	0.26	0.36	0.11
7	(Item 6)	(Item 8)	0.35	0.36	0.14
8	(Item 4)	(Item 7)	0.26	0.36	0.12
9	(Item 10)	(Item 6)	0.29	0.35	0.14
10	(Item 6)	(Item 10)	0.35	0.29	0.14

	confidence	lift	leverage	conviction	zhangs_metric
0	0.480000	1.333333	0.0300	1.230769	0.333333
1	0.480000	1.333333	0.0300	1.230769	0.333333
2	0.444444	1.307190	0.0376	1.188000	0.367187
3	0.470588	1.307190	0.0376	1.208889	0.356061
4	0.440000	1.222222	0.0200	1.142857	0.242424
5	0.461538	1.282051	0.0264	1.188571	0.297297
6	0.423077	1.175214	0.0164	1.109333	0.201474
7	0.400000	1.111111	0.0140	1.066667	0.153846
8	0.461538	1.282051	0.0264	1.188571	0.297297
9	0.482759	1.379310	0.0385	1.256667	0.387324
10	0.400000	1.379310	0.0385	1.183333	0.423077

/usr/local/lib/python3.10/dist-packages/ipykernel/ipkernel.py:283: DeprecationWarning: and should run async(code)

Sample Transaction

Frequent Itemsets from FP-Growth:

	support	itemsets
0	0.36	(Item 6)
1	0.35	(Item 10)
2	0.35	(Item 2)
3	0.36	(Item 7)
4	0.35	(Item 5)
5	0.28	(Item 8)
6	0.28	(Item 3)
7	0.22	(Item 4)
8	0.26	(Item 1)
9	0.30	(Item 9)
10	0.10	(Item 7, Item 6)
11	0.11	(Item 7, Item 10)
12	0.16	(Item 2, Item 6)
13	0.11	(Item 2, Item 10)
14	0.11	(Item 2, Item 5)
15	0.10	(Item 7, Item 2)
16	0.15	(Item 7, Item 5)
17	0.10	(Item 5, Item 10)
18	0.11	(Item 5, Item 6)
19	0.10	(Item 7, Item 8)
20	0.13	(Item 2, Item 8)
21	0.10	(Item 8, Item 6)
22	0.18	(Item 10, Item 3)
23	0.12	(Item 4, Item 10)
24	0.11	(Item 1, Item 5)
25	0.14	(Item 10, Item 9)
26	0.12	(Item 5, Item 9)
27	0.10	(Item 7, Item 9)

Association Rules from FP-Growth:

	antecedents	consequents	antecedent support	consequent support	support \
0	(Item 10)	(Item 3)	0.35	0.28	0.18
1	(Item 3)	(Item 10)	0.28	0.35	0.18
2	(Item 4)	(Item 10)	0.22	0.35	0.12

	confidence	lift	leverage	conviction	zhangs_metric
0	0.514286	1.836735	0.082	1.482353	0.700855
1	0.642857	1.836735	0.082	1.820000	0.632716
2	0.545455	1.558442	0.043	1.430000	0.459402